

1. The expression will reveal the approximate number of pizza restaurants in the United States. Evaluate the expression to find it.

$$60(30^2) + 900\sqrt{81}$$

2. Solve: $3(b + 4b) = 40 - 15 + 20$

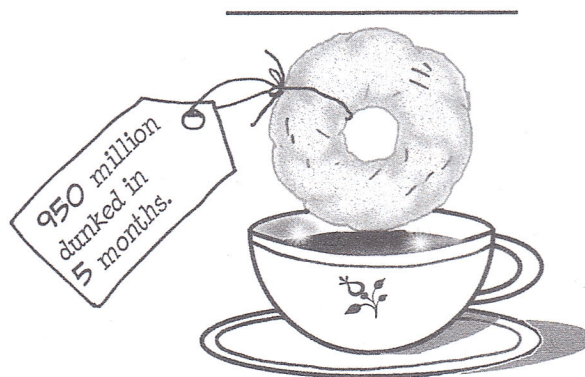
3. Finish the sentence:

Negative six to the sixth power $(-6)^6$ is _____.

4. How many *like terms* are found in this expression?

$$\frac{1}{2}d + d^2 - 3d^3 + 6d = -7$$

5. Some reports claim that the *Dunkin' Donuts* chain sells 950 million doughnuts in five months. At this rate, how many doughnuts would the chain of shops sell in one year?



1. Which numbers have square roots ≤ 18 ?

$$\sqrt{400}$$

$$\sqrt{441}$$

$$\sqrt{144}$$

$$\sqrt{121}$$

$$\sqrt{361}$$

$$\sqrt{225}$$

$$\sqrt{324}$$

2. Colonel Sanders' original white suit (worn in Kentucky Fried Chicken ads) was auctioned off for a hefty sum of money. This amount (in dollars) is a whole number with five even digits. At least one digit is > 5 . Four digits are the same, and the sum of the digits is eight. How much was paid for the suit?

3. Write this expression in words:

$$(x^3 - 18) \geq 25$$

4. Solve: $\frac{1}{2} - y = -\frac{1}{2}$

5. One of the world's largest McDonald's restaurants is found in the capital city of China. Its area is 28,000 square feet.

- If the length is 400 feet, what is the perimeter?
- If the length is 500 feet, what is the perimeter?



1. This number represents the amount (in ounces) of orange juice served in a week (seven days) at Burger King restaurants worldwide: 2.8×10^9 .

How many ounces are served in a day?
Write the number in standard notation.

2. Is the solution correct?

$$\begin{aligned}\frac{3}{2}x &= -3 \\ x &= -2\end{aligned}$$

3. Simplify both sides of the equation:

$$7n - n + n(6) = n^3 + (25 - 8) - 4n^3$$

4. Circle the correct answer:

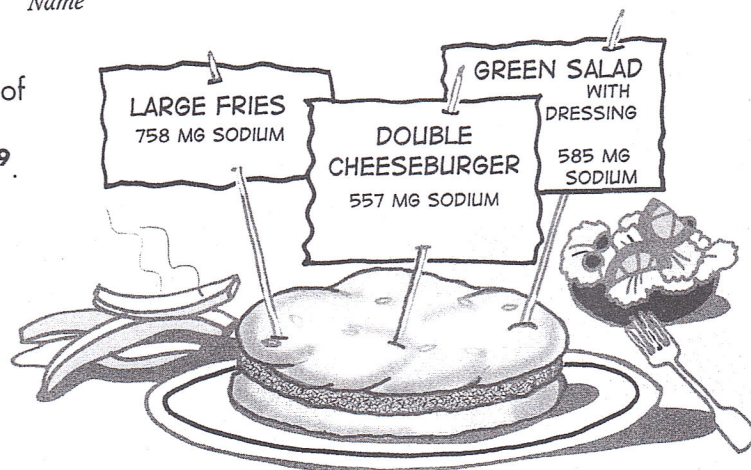
$$\left(\frac{4}{x}\right)(xy) =$$

$4y$

$4x^2y$

$2x$

$x^2 + 4y$



5. The signs show the sodium (salt) content in some choices at a fast food restaurant. Peyton ordered (and ate) one of each item shown, taking in 1.9 times the maximum daily recommended amount of sodium. What is the amount recommended for daily consumption?

1. A group of eight friends visited In & Out Burger restaurant and ordered a hamburger with 100 meat patties. It took them two hours to eat the burger, which contained a whopping 19,490 calories.

If they all ate approximately the same amount at the same speed, how many calories did each person consume in an hour?
(Round to the nearest whole number.)

2. Multiply: $-2 \cdot \sqrt{16} \cdot \sqrt{256}$

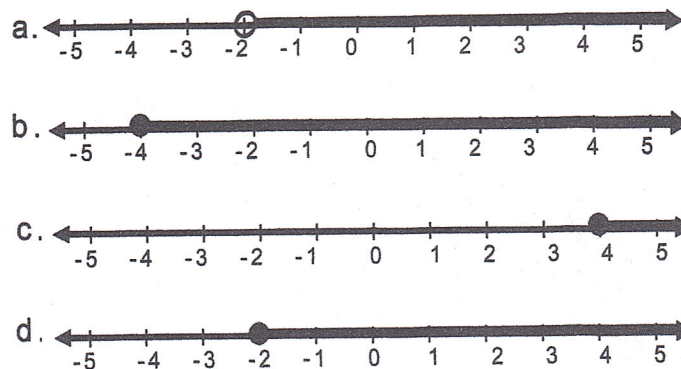
3. Evaluate for $a = 6$, $b = 4$, and $c = -3$.

$$-2a(b + 2c)$$

4. How many square roots does -625 have?

5. Which example below is a correct graph of this inequality?

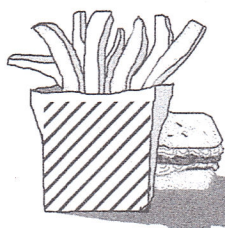
$$2x \geq 3 - 7$$



1. When Burger King opened its doors in 1957, Erik's dad was able to buy a Whopper for 37¢. Yesterday, Erik bought one for \$3.33. What is the percent of increase in the price over the years?

2. Explain why $\sqrt{48} = 4\sqrt{3}$.

3. If $xy - 35 - y = -12$, could $y = -7$?



4. Finish the table and write the ordered pairs.

$$3x + y = -4$$

x	y	(x, y)
-5		()
	2	()
	-4	()
	-1	()
1		()
3		()
	-19	()
6		()

5. Challenge Problem

Bigbucks Coffee Shop is always trying to make a buck. They blend coffee worth \$5.00 a pound with a cheap coffee worth \$1.00 a pound to make it taste better. If they want to make 50 pounds of a mixture that costs them \$3.00 a pound to make, how much of each grade of coffee would they use?

Use the table to help set up an equation and solve the problem.

Grade	Cost in Cents	# of Pounds	Total Value in Cents
CHEAP	100	x	100x
BETTER	500	50 - x	500(50 - x)
Grade	Cost in Cents	# of Pounds	Total Value in Cents
CHEAP	100	x	100x
BETTER	500	50 - x	500(50 - x)
MIXTURE	300	50	15,000

